(mold)

#19



1600

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/442,489B

DATE: 06/12/2002

TIME: 16:54:40

Input Set : A:\EP.txt

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<110> APPLICANT: Albertsen, Hans
        Anand, Rakesh
        Carlson, Mary
        Groden, Joanna
 7
        Hedge, Philip John
 8
        Joslyn, Geoff
 9
        Kinzler, Kenneth
.10
       Markham, Alexander Fred
11
        ·Nakamura, Yusuke
12
         Thliveris, Andrew
13
                                                               ENTERED
         Vogelstein, Bert
14
         White, Raymond L.
17 <120> TITLE OF INVENTION: APC Antibodies
20 <130> FILE REFERENCE: 001107.78817
22 <140> CURRENT APPLICATION NUMBER: US 09/442,489B
23 <141> CURRENT FILING DATE: 1999-11-18
25 <150> PRIOR APPLICATION NUMBER: US 08/452,654
26 <151> PRIOR FILING DATE: 1995-05-25
28 <150> PRIOR APPLICATION NUMBER: US 08/289,548
29 <151> PRIOR FILING DATE: 1994-08-12
31 <150> PRIOR APPLICATION NUMBER: US 07/741,940
32 <151> PRIOR FILING DATE: 1991-08-08
34 <160> NUMBER OF SEQ ID NOS: 154
36 <170> SOFTWARE: FastSEQ for Windows Version 4.0
38 <210> SEQ ID NO: 1
39 <211> LENGTH: 9606
40 <212> TYPE: DNA
41 <213> ORGANISM: Homo sapiens
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45 ttaaagcaag ttgaggcact gaagatggag aactcaaatc ttcgacaaga gctagaagat
                                                                          120
46 aattocaato atottacaaa actggaaact gaggcatota atatgaagga agtacttaaa
                                                                          180
47 caactacaag gaagtattga agatgaagct atggcttctt ctggacagat tgatttatta
                                                                          240
48 gagcgtctta aagagcttaa cttagatagc agtaatttcc ctggagtaaa actgcggtca
                                                                          300
49 aaaatgtccc tccgttctta tggaagccgg gaaggatctg tatcaagccg ttctggagag
                                                                          360
50 tgcagtcctg ttcctatggg ttcatttcca agaagaggt ttgtaaatgg aagcagagaa
                                                                           420
51 agtactggat atttagaaga acttgagaaa gagaggtcat tgcttcttgc tgatcttgac
                                                                           480
52 aaagaagaaa aggaaaaaga ctggtattac gctcaacttc agaatctcac taaaagaata
                                                                           540
53 gatagtette etttaaetga aaatttttee ttacaaacag atttgaccag aaggeaattg
                                                                           600
54 gaatatgaag caaggcaaat cagagttgcg atggaagaac aactaggtac ctgccaggat
                                                                           660
 55 atggaaaaac gagcacagcg aagaatagcc agaattcagc aaatcgaaaa ggacatactt
                                                                           720
 56 cgtatacgac agcttttaca gtcccaagca acagaagcag agaggtcatc tcagaacaag
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 57 catgaaaccg gctcacatga tgctgagcgg cagaatgaag gtcaaggagt gggagaaatc
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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/442,489B

DATE: 06/12/2002 TIME: 16:54:40

Input Set : A:\EP.txt

				•			•	
_	Ω:	aacatuucaa	cttctggtaa	tggtcagggt	tcaactacac	gaatggacca	tgaaacagcc	900
-	- ^	+ _ + + + ~ ~	attataataa	cacacactct	gcacctcqaa	qqctqacaag	ccacceggga	960
,	- ^		aaataatata	ttcattqttq	tcaatgcttg	quadicalya	Laaggacgac	1020
			atttaataac	tatototago	teccaagaca	quiqualace	catgogaous	1080
			++aatatact	catccagctt	ttacatqqca	atyacaaaya	Ccccgcaccg	1140
	· ~	++++	accadadaced	taaagaggct	caaaccaaaa	Ccaytycayc	accedaca	1200
	- 4	-+-s++ as a+	gagagggtga	tgacaagaga	aacaaacata	adatticyayı	CCCCCCCCC	1260
	~~		tagggggtta	ctataaaacc	tattaaaal	qqcaqqaagc	ccucgaaooa	1320
,			2442422222	tecaatgeca	actcctquiq	aacatcayac	Cracoriaco	1380
	c -		tastasaact	ttcatttgat.	gaagagcata	gacatycaat	gaacgaacca	1440
	c 0	a	aggogattgc	agaattatto	caagtggact	gigaaaiyia	Lyggettaet	1500
	~ ^	aaaaat	agagtattac	actaagacga	tatoctodaa	Lyguillyac	addecegaee	1560
	<b>-</b> ^	+++	+200022022	ggetaegeta	tactctatqa	aaggetgeat	gagageaeee	1620
	70	tttggagatg	tagecaacaa	aagtgaagac	ttacagcagg	ttattgcaag	tgttttgagg	1680
	/ T	gtggcccaac	ragangaga	tataaataat	aaaaagacgt	tgcgagaagt	tggaagtgtg	1740
	12	aattigicti	taaaatataa	tttagaagtt	aaaaaggaat	caaccctcaa	aagcgtattg	1800
	/3	aaagcattga	eggaatgtgc	accacattcc	actgagaata	aagctgatat	atgtgctgta	1860
	74	agtgeettat	ggaacttytt	agedeacege	cttacttacc	ggagccagac	aaacacttta	1920
	75	gatggtgcac	Ligitation	taggatatta	cagaatatat	ccagettgat	agctacaaat	1980
	76	gccattattg	aaagtygagg	aagagagaga	aactgtctac	aaactttatt	acaacactta	2040
	77	gaggaccaca	ggcaaatcct	aayayayaac	gcatgtggaa	ctttqtqqaa	teteteagea	2100
	78	aaatctcata	gtttgacaat	agicagiaac	. gedegeggdd	cagttagcat	gctcaagaac	2160
	79	agaaatccta	aagaccagga	agcarrary	ataaaaata	ctgcagcttt	aaggaatctc	2220
	80	ctcattcatt	caaagcacaa	aatyattyet	. acgggaageg	tatetectag	ctcaagcttg	2280
	81	atggcaaata	ggcctgcgaa	gcacaayyac	. gccaacacca	r aattagatgo	teageactta	2340
	82	ccatctcttc	atgttaggaa	acaaaaaycc	arteceaago	r catctcatco	tagtaagcag	2400
	83	tcagaaactt	ttgacaatat	. ayacaacca . taataattat	gtttttgaca	ccaatcgaca	tgatgataat	2460
	84	agacacaago	aaagicicia	tagasaata	, actotocttt	caccatattt	gaatactaca	2520
	85	aggtcagaca	attttaatat	; tygcaacacg	agettagata	attctcqttc	tgaaaaagat	2580
		gtgttaccca	geteetette	, accaagagge	ctaggcaact	accatccago	aacagaaaat	2640
	87	agaagtttgg	agagagaacg	, aggtttgga	atctccacca	ctgcagccca	gattgccaaa	2700
	88	ccaggaactt	cttcaaageg	, aggillegeag	r teteaggaag	acagaagtto	tgggtctacc	2760
	89	gtcatggaag	aagtgleage	, catteatace	a aatgcactta	gaagaagcto	tgctgcccat	2820
	90	actgaattac	atigigigad	tttaaataa	t cogaaaatt	caaatagga	atgttctatg	2880
	91	acacattca	acacilaca	, caagagatet	t caaatgata	a gtttaaata	tgtcagtagt	2940
	92	ccttatgcca	aditayaata	a caagagaco	a aaaccet.co	a ttgaatcct	ttctgaagat	3000
	93	aatgatggti	algglaaaag	ttatootca	a tacccagec	acctagece	a taaaatacat	3060
	94	gatgaaagta	a agululgua	a taatgatga	a gaactagat	a caccaataa	ttatagtett	3120
	95	agtgcaaat	atalyyalyo	t dategatega.	a aggcaaagt	c cttcacaga	a tgaaagatgg	3180
	96	aaatatteag	g algageage	t agaagatga	a ataaaacaa	a gtgagcaaa	g acaatcaagg	3240
	9/	gcaagaccc	a acacacaca	c tatttatac	t gagagcact	gatgataaac	a cctcaagttc	3300
	~ ~		L ++ ~~~ ~~~	a amaatatat	r rerecatac	a qqtcacqqq	g agccaacggc	3360
	99	caaccacat	t Liggadayd	a gguutgege	at ggaattaa	tc aaaatgta	ag ccagtctttg	3420
	T0	U tcagaaac	aa alcyayiy	gg ccccaaco	ag octaccaa	tt atagtgaa	cg ttactctgaa	3480
		^	ataaaaaa	os arararac	ca acaaalta	La ucatada	ca caacyaayay	3540
	10	2 gaagaaca	yo alyaayaa ta taaataaa	ga agagagac aa tattaatt	at agtitaaa	at atgccaca	ga tatteettea	3600
				to atteteaa	ad aditionle	Lu uacaaayc	ay caaaaccjaa	3660
	10		tt assaasat	aa aatacat	cc acacette	al Claalycc	aa gaggcagaas	3720
	10	o catatgtc	to caaycayt	gu guatucgt ac acadadta	ga agtggtca	gc ctcaaaag	gc tgccacttgc	3780
	10	o cayeteca	co caayiici	go acagagea	JJ-JJ	_		

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/442,489B T

DATE: 06/12/2002 TIME: 16:54:40

Input Set : A:\EP.txt

				as as attatt	atatagaaga	tactccaata	3840
107	aaagtttctt	ctattaacca	agaaacaata	cagacttatt	ctgaagatga	aataggatgt	3900
108	tgtttttcaa	gatgtagttc	attatcatct	ttgtcatcag	aaataggaaga	aataaaagga	3960
109	aatcagacga	cacaggaagc	agattctgct	aataccctgc	ttccaccagt	gtcacagcac	4020
			+ assault CCL	araaacaaa	LLCCAGCAG	gcouous	4080
			20100000T	TCTAOLLIAL.	CLLCagaacc	ugoows55	4140
112	aaagctgttg	aatttccttc	aggagcgaaa	tctccctcca	tatttaggag	atgtacttct	4200
			+ ~+ + ~ ~ ~ ~ ~ ~ ~	accccacica	Lullagucas	u cy cuo a a a a	4260
							4320
		++-aartaa	asttataanc	CCCAULUALU	LLCCAGACAG	000055	4380
			t a a a a c a c c t	CCACCACCLC	Cicadacago		4440
			addaddt act	aciaaaaaaa	qaqaqaqcqq	account just and	4500
		atactacaat	transgrate	cadditclic	Cayatyctyu	Lucecuatou	4560
			+ aaaaa + aaa	TTTTCHLULL	Calleageer	gagagaaaa	4620
			Tenerence	aragaaliaa	uaataatyoo	cockgoodag	4680
		-+-~~~~ta	SOTESTOS	GAGCAGCCLA	adquattua	0 9 4 4 4 4 4	4740
			ナッナナベコナナベエ	daaddudcc	Lattaquequ	ccca garaga	4800
			242244F2FF	arrici de deca	Luccaacaaa	90000	4860
			anatacttca.	aaai racci.c	Caccequage	uugguuu-	4920
			20ttctacca	тсасадааса	qqttqtaacc	00000	4980
			+ matatmoora	- Caaaaaaa	ululluaaayy	gucucou au au	5040
_			Tahaaataat	CTAACAALCU	aatttttt	u.u.u.u.g.u.g.u.g.u.g.u.g.u.g.u.g.u.g.u	5100
			SONGORGA	canteagulu	aatttyaaaa	acgagacac	5160
			tacadatdad	acteaauuau	qaaaaacccc	u.coog	5220
		++~~~~	tasancadad	- daadu Lua La	LLCLLqcuqu	acgours	5280
			t	- CCTTTCCQLQ	Luaaaaauuu	uucggacca	5340
			~+ ~+ t ^+ ^+ ^	СССААСАААА	allaullauu	C990000	5400
		-++aaaaa	2222001212	- ссасадаци	Clyaatatag	guouogogo	5460
			a a a t a a t t T T A	aaructuaya	gaquuucuu	. a g o	5520
			MassasaT A A T	Trraduudet	LUGGLYGLGG	90000	5520 5580
				TTIGALICAU	: CLCalcaca	Cacquoun	5640
			++aaaaaaa	TATICILLUA	. quicciciaga	, cccagaaj	
		+++	TODDSSSSSS	Gaallaayaa	l aggcaaaaga		5700 5760
			r ccacacagaa	LCTAACCLCCA	laccaacaacc	, agocaaoaa	
			. accastasat	- coaggicauc	Claaaccca	. accedagaaa	5820
			, atomasagao	e araccauaca	i uaqqqqcaqc	, aaccyacyacy	5880
			+ 422221201	ccaatttuct	, LLLLLLLLLLLLL		5940
				r aacaataday	, aaaalyaacc	, caccaaaa	6000
		+a+aaaa	, колапаасса	a adradacete	; aaycaccuy	, 0000500	6060
		+~++~~~~	taccccadit	- farrrctcaa	i yaaacayee	, cocougacou	6120
		+-+	. taaactatt(	r caddaalula	i Laayuluuy	, uucgcouuuu	6180
			י מססמתתדתמו	- aaruaaaau	a Lag Locour	, a.a	6240
			- wadacttdai	r rroaaauata	i Lacayayac	, agaccoagan	6300
			, 202222TTT	- nailuuaaau	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		6360
			. + a > a a c t d c i	r actactuca.	L quillatouu	q acampees	6420
			- +tocctcaa;	a reaggaale	L CLCLYYYAL	, accare	6480
			, 2222CCCtt.	r acaaqiaal	a aayyuuuuu	y auccount	6540
	_		- ~~~~~~	a aacatacaa	i. Cludadayca	2 4994	6600
			a aantttnari	r aciduadada	u LLCyalcua	a ccompanie	6660
1 E	4 yyayyaada 5 taadadaa	a tgaaacagc	ccttcaage	a aacatgcct	t caatctctc	g aggcaggaca	6720
13	Jedayyedaa	a cyaaacayo.		-			

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/442,489B

DATE: 06/12/2002 TIME: 16:54:40

Input Set : A:\EP.txt

Output	•				6700
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					7080
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					7200
					7260
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					8040
					8100
					8160
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					8700
					8760
					8820
					8880
					8940
					9000
					9060
					9120
					9180
					9240
					9300
					9360
					9420
					9480
					9540
202 gcctctttta aaagcttata 203 cctcttactg taataaaaac	attasaasa	actattace	a cttaaccat	t ccatgcgttg	9600
203 cctcttactg taataaaac	accyaayaay	200900900			9606
204 gcactt					

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/442,489B

DATE: 06/12/2002
TIME: 16:54:40

Input Set : A:\EP.txt

				NO:						:		•)	. * *			*
	<211				43											
					Homo	san	iens	i								
	<213> ORGANISM: Homo sapiens <400> SEQUENCE: 2															
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213	1	niu	1114		5	-1	1			10	-				15	
213	Lve	Met	Glu	Asn		Asn	Leu	Arq	Gln	Glu	Leu	Glu	Asp	Asn	Ser	Asn
215	цуз	HCC	OIU	20	001			5	25				_	30		
213	Пiс	T.011	Thr	LVS	Leu	Glu	Thr	Glu	Ala	Ser	Asn	Met	Lys	Glu	Val	Leu
217	птэ	пси	35	шуо	Lcu	0		40					45			
217	T.V.C	Gln	Len	Gln	Glv	Ser	Ile	Glu	Asp	Glu	Ala	Met	Ala	Ser	Ser	Gly
219	цуз	50	Deu	0111			55		_		•	60				
220	Gln	Tle	Asn	Len	Leu	Glu		Leu	Lys	Glu	Leu	Asn	Leu	Asp	Ser	Ser
221		110	пор	Lou		70	5		_		75					80
221	Aen	Dhe	Pro	Glv	Val		Leu	Arq	Ser	Lys	Met	Ser	Leu	Arg	Ser	Tyr
223	LOII	THE	110	<u>-1</u>	85	-1-		,		90					95	
223	G1 v	Ser	Ara	Glu	Glv	Ser	Val	Ser	Ser	Arg	Ser	Gly	Glu	Cys	Ser	Pro
225				100					105					TTO		
225	Va 1	Pro	Met	Glv	Ser	Phe	Pro	Arq	Arq	Gly	Phe	Val	Asn	Gly	Ser	Arg
227	Val	110	115					120	,	•			125			
227	Glu	Ser	Thr	Glv	Tvr	Leu	Glu	Glu	Leu	Glu	Lys	Glu	Arg	Ser	Leu	Leu
229		130					135					140				
230	Len	Ala	Asp	Leu	Asp	Lvs	Glu	Glu	Lys	Glu	Lys	Asp	Trp	Tyr	Tyr	Ala
	145				1	150			-		155					160
232	Gln	Leu	Gln	Asn	Leu	Thr	Lys	Arg	Ile	Asp	Ser	Leu	Pro	Leu	Thr	Glu
233					165					170					1/5	
234	Asn	Phe	Ser	Leu	Gln	Thr	Asp	Leu	Thr	Arg	Arg	Gln	Leu	Glu	Tyr	Glu
235				180					185					T90		
236	Ala	Arq	Gln	Ile	Arq	Val	Ala	Met	Glu	Glu	Gln	Leu	Gly	Thr	Cys	Gln
237			195					200					205			
238	Asp	Met	Glu	Lys	Arg	Ala	Gln	Arg	Arg	Ile	Ala	Arg	Ile	Gln	Gln	Ile
239		210					215					220				
240	Glu	Lys	Asp	Ile	Leu	Arg	Ile	Arg	Gln	Leu	Leu	Gln	Ser	Gln	Ala	Thr
241	225				٠.	230					~235					240
242	Glu	Ala	Glu	Arg	Ser	Ser	Gln	Asn	Lys	His	Glu	Thr	Gly	ser	His	Asp
243					245					250					255	
244	Ala	Glu	Arg	Gln	Asn	Glu	Gly	Gln	Gly	Val	Gly	Glu	Ile	Asn	Met	Ala
245				260					265					270		
246	Thr	Ser	Gly	Asn	Gly	Gln	Gly	Ser	Thr	Thr	Arg	Met	Asp	His	Glu	Thr
247			275					280				•	203			
248	Ala	Ser	Val	Leu	Ser	Ser	Ser	Ser	Thr	His	Ser	Ala	Pro	Arg	Arg	Leu
249		290					295					300				
250	Thr	Ser	His	Leu	Gly	Thr	Lys	Val	Glu	Met	Val	Tyr	Ser	Leu	Leu	Ser
251	305					310					315					320
252	Met	Leu	Gly	Thr	His	Asp	Lys	Asp	Asp	Met	Ser	Arg	Thr	Leu	Leu	Ala
253					325					330					335	
254	Met	Ser	Ser	Ser	Gln	Asp	Ser	Cys	Ile	Ser	Met	Arg	Gln	Ser	Gly	Cys
255				340					345					350		

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/442,489B

DATE: 06/12/2002 TIME: 16:54:41

Input Set : A:\EP.txt

Output Set: N:\CRF3\06122002\I442489B.raw

## Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the  $\langle 220 \rangle$  to  $\langle 223 \rangle$  fields of each sequence which presents at least one n or Xaa.

Seq#:3; N Pos. 45,1057,1117,1553,1559,1581,1590,1639,1644,1749,1757,1769 Seq#:3; N Pos. 1948,1961,1962,1987,1991,2162,2183,2201,2204,2241,2242,2461

Seq#:3; N Pos. 2570,2574,2576,3142

Seq#:16; N Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13

Seq#:32; N Pos. 17
Seq#:36; N Pos. 8